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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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§ Art Unit: 2631
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Serial No.: 09/471,435

Examiner: Khanh C. Tran

Filed: December 23, 1999

Title: ASYMMETRIC DIGITAL SUBSCRIBER
LOOP MODEM

Docket No.: ITL.0296US
(P6509)

Commissioner for Patents
Washington, D.C. 20231

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REPLY TO OFFICE ACTION MAILED OCTOBER 3, 2002

In response to the Office Action mailed October 3, 2002, the Applicants request the Examiner to please reconsider the rejection in view of the following remarks.

REMARKS

Claims 1-10 and 14-30 stand rejected under 35 U.S.C. §103(a) over *Liu et al.*, U.S. Patent No. 6,345,072B1 (hereinafter "*Liu*"). In addition, claims 11-13 stand rejected further in view of *Cheng et al.*, U.S. Patent No. 6,456,650B1 (hereinafter "*Cheng*"), as being obvious.

Claim 1 calls for an asymmetric digital subscriber loop (ADSL) modem including an integrated circuit that may contain an analog-to-digital converter to produce data at a relatively higher data rate. In the integrated circuit, a device may couple to the analog-to-digital converter to reduce the higher data rate data from the analog-to-digital converter to a lower data rate. Finally, a multiplexer may multiplex the lower data rate data and control information and transmit the data and control information externally of the integrated circuit.

However, *Liu* fails to teach or suggest an asymmetric digital subscriber loop modem in which a device and a multiplexer may be coupled within an integrated circuit such that while the device may reduce the higher data rate data from an analog-to-digital converter to a lower data rate, the multiplexer may transmit the multiplexed lower data rate data and control information out of the integrated circuit. Since the Examiner fails to point to a specific hint or a teaching in the *Liu* reference which supports the

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I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as **First Class Mail** with sufficient postage on the date indicated above and is addressed to the Commissioner for Patents, U.S. Patent and Trademark Office, Washington, D.C. 20231.

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